



## **Cement & Lime Decarbonization Workshop**

Hilton Garden Inn Pittsburgh / Southpointe, Canonsburg, PA

July 19 – 20, 2023

### **Day 1: July 19, 2023**

#### **9:00 am – 10:00 am: Welcome Breakfast – Parlor A**

**Opening Remarks** (Moderator – Ron Munson)

**Dan Hancu** – Office of Fossil Energy and Carbon Management (FECM),  
U.S. Department of Energy

**Paul Majsztrik** – Industrial Efficiency & Decarbonization Office (IEDO),  
U.S. Department of Energy

**Jeremy Leong** – Office of Clean Energy Demonstrations (OCED),  
U.S. Department of Energy

#### **10:00 am – 12:00 pm: Session 1 – Parlor A**

**Current DOE Efforts on Cement & Lime Decarbonization** (Moderator – Krista Hill)

“Environmental Impact Testing Results of Svante Technology”  
Mark Claessen – Svante

“Intensified Water-Lean Solvent CO<sub>2</sub> Capture System for Cement Flue Gas”  
Vijay Gupta – RTI International

“Cryogenic Carbon Capture from Cement Production”  
Larry Baxter – Brigham Young University

“LH CO<sub>2</sub>MENT Colorado Project”  
Mark Claessen – Svante

“Engineering Design of a Polaris Membrane CO<sub>2</sub> Capture System at a Cement Plant”  
Brice Freeman – MTR

“Industrial Carbon Capture from a Cement Facility Using the Cryocap FG Process”  
Kevin O'Brien – University of Illinois Urbana-Champaign



“Carbon Capture Plant Front-End Engineering Design (FEED) Study for Cement Manufacturing”

Vijay Gupta – RTI International

“Mitchell Cement Plant Integrated CO<sub>2</sub> Capture Project”

Gregory Ronczka – Heidelberg Materials

“Net-Zero Lime Kiln and Carbon Removal Facility”

Nick Papanicolau – Carmeuse

“An Innovative Process for Direct Utilization of CO<sub>2</sub> in Solid Synthetic Pozzolan Production”

Pradeep Ghosh – Solidia Technologies

Decarbonization of Cement and Concrete Consortium

Joe Hicken – Sublime Systems

#### **12:00 pm - 1:00 pm: Lunch & DOE Remarks – *Parlor A***

Kelly Visconti – Acting Deputy Director for Facility and Workforce Assistance in the Office of Manufacturing and Energy Supply Chains (MESCC) (Virtual)

Noah Deich – Deputy Assistant Secretary for Carbon Management (Virtual)

#### **1:00 pm – 2:00 pm: Session 2 – *Parlor A***

**Regulatory and Standards Discussion** (Moderator – Isabelle Sgro Rojas)

Louis Baer – Portland Cement Association

Webly Bowles – New Buildings Institute

Aron Newman – NIST

#### **2:00 pm – 4:00 pm: Session 3 – *Parlor A***

**Decarbonization Plans and Strategies in the Cement and Lime Industries**

Current, Mid-Term, and Long-Term Decarbonization Strategies

Decarbonization Plans Panellists (Moderator – Mani Gavvalapalli):

Bill Herz – National Lime Association

Derick Dreyer – Holcim

Bernardo Cioni – Cemex USA

Gregory Ronczka – Heidelberg Materials



Decarbonization Barriers Panellists (Moderator – Isabelle Sgro Rojas):  
Mathieu Bouchard – National Lime Association / Graymont  
Tom Van Dam – Wiss, Janney, Elstner Associates, Inc.  
Lionel Lemay – National Ready Mix Concrete Association  
Eric Trusiewicz – Stanford University

**4:00 pm – 4:15 pm: Coffee Break**

**4:15 pm – 5:45 pm: Session 4 – Parlor A**

**Facilitated Discussion: Unique Production Process Characteristics  
Impacting Decarbonization**

1. Existing Plant Retrofits (Moderator – Ron Munson)
  - o Derick Dreyer – Holcim
  - o Marc Messenger – Graymont
2. New Processes and Greenfield Plants (Moderator – Isabelle Sgro Rojas)
  - o Joe Hicken – Sublime
  - o Simon Brandler – Brimstone
3. Alternative Binders and New SCMs (Moderator – Paul Majsztrik)
  - o Rick Darnell – Holcim
  - o Steve Bryan – Ecocem

**Day 2: July 20, 2023**

**8:00 am – 9:00 am: Breakfast**

**9:00 am – 9:45 am: Decarbonization of a European Cement Production  
Facility – Parlor A**

Andrew Burns – Heidelberg Materials (Virtual)

**9:45 am – 10:45 am: Techno-Economic Modeling Studies – Parlor A**

Eric Grol – National Energy Technology Laboratory, U.S. Department of Energy  
Mike Matuszewski – Carbon Capture Simulation for Industry Impact (CCSI<sub>2</sub>)

**10:45 am – 11:00 am: Coffee Break**



**11:00 am – 11:30 am: Lift-Off Report – *Parlor A***

Sam Goldman – Loan Programs Office / DOE

**11:30 am – 12:30 pm: *Lunch***

**12:30 pm – 2:00 pm: Session 5**

**Breakout Sessions on Technical Needs / Issues**

1. Existing Plant Retrofits – Allegheny A
2. New Processes and Greenfield Plants – Allegheny B
3. Alternative Binders and New SCMs – Allegheny C

**2:00 pm – 3:30 pm: Session 6 – *Parlor A***

Breakout Reports  
Next Steps  
Discussion on R&D Needs